

a' mid. programmed using an anti-fuse programming technique, the ROM cells can also be programmed by providing a high leakage path (not full short) such as through an active area to the substrate.

IN THE CLAIMS

Please cancel, without prejudice, claims 5 – 7 and 18 – 20.

Please amend claims 14, 17, 21, and 22 to read as follows:

14. (amended) A half-density read only memory (ROM) comprising:
an array of ROM cells each comprising first and second memory cells, the first memory cell is hard programmed in a non-volatile manner to a first voltage and the second memory cell is a volatile memory cell capacitor; and
access circuitry coupled to read each ROM cell, wherein the access circuitry electrically couples the first and second memory cells to differential sensing circuitry.

17. (amended) A method of operating a read-only memory comprising:
programming a first memory cell in a non-volatile manner to a first data state by hard programming the first memory cell to a first voltage level;
providing an un-programmed volatile memory cell; and
accessing both the first and second memory cell capacitors in response to word line signals.

21. (amended) The method of claim 17 wherein the first memory cell comprises a plate electrically coupled to the first voltage level.

22. (amended) The method of claim 21 wherein the plate is electrically coupled to the first voltage level that is equal to Vcc or Vss.